

## **REMARKS**

Claims 1, 2, 5, 7-19, 21, 22, 24-40, 42 and 43 are pending in the application. Applicants thank Examiner Aughenbaugh for reconsideration and withdrawal of the rejection of Claims 1, 21 and 42 under 35 U.S.C. §112, first paragraph, and the objection to the specification. For at least the following reasons, Applicants submit all pending claims are in condition for allowance.

Consideration of the remarks after final is proper under 37 C.F.R. §1.116 because 1) no amendment to the claims is presented; 2) the remarks clarify issues previously presented; and 3) the remarks place the application in condition for allowance, or in better condition for appeal should an appeal be necessary. Entry and consideration of the remarks are thus respectfully solicited.

### **35 USC §103(a) over Maier et al. in view of Narita et al.**

Claims 1, 2, 5, 7, 9-19, 21, 22, 24-26, and 28-39 have been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al. Claims 8 and 27 have been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al., and further in view of Saito et al. Claim 40 has been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al., and further in view of Hart et al. For at least the following reasons, Applicants traverse each and every rejection.

Independent claims 1 and 21, from which all other claims depend, are directed to shaped articles comprising a continuous first polymer phase having dispersed therein microbeads of a cross-linked second polymer. The microbeads are thermally stable defined as having a 2% weight loss above 270°C, and have a change in CIELAB b\* toward yellowness less than or equal to 0.2 on exposure to UV light. The microbeads do not contain any coloring agent. As set forth in the specification at page 7, lines 25-26, “suitable cross-linked second polymers useful for the microbeads are those that provide both improved yellowing and thermal stability.” The problem that the invention addresses is the known yellowing of styrenic materials when exposed to UV light. As known to those skilled in the art, styrenic materials yellow over time due to the increased cross-linking of the styrenic monomers on exposure to UV light. Addition of colorants such as pigments to styrenic materials can change the apparent color of the styrenic material, but the colored material still experiences an overall shift in yellowness over time due to the yellowing of the styrenic material. Addition of pigments to

the styrenic material does not prevent the shift in yellowness from occurring, but may help mask the yellowing.

Applicants invention is recognizing and setting forth that an acrylic-containing material with a minimal amount (less than 10% by weight) of styrenic monomers does not experience the yellowing of styrenic monomer-containing materials and also has improved thermal stability as compared to such styrenic-monomer containing materials.

The Office Action references the arguments set forth by the Examiner in the Office Action dated August 4, 2004, which in turn references the arguments set forth by the Examiner in the March 29, 2004 Office Action. It is admitted by the Patent Office at page 4 of the Office Action mailed March 29, 2004, that Maier et al. “fail to explicitly teach that the microbeads have a change in CIELAB value b\* towards yellowness on exposure to UV light wherein the change in b\* is less than or equal to 0.2.” Maier et al. also fails to teach or disclose thermal stability as compared to other styrenic materials. Col. 3, lines 9-12, cited in the Office Actions, states that the materials of Maier et al. have “superior thermal and chemical stability, when compared with the prior art, especially the cellulose esters.” Cellulose esters have poor thermal stability, as known by those skilled in the art. There is no specific teaching or suggestion that the materials of Maier et al. have a 2% weight loss above 270°C, as required by the claimed invention.

Narita et al. is relied on for a teaching of incorporation of a colorant into the dye receptor layer of a thermal transfer-receiving sheet. In particular, inclusion of a white pigment is done to impart screenability of a background or white color to the dye receptor layer. *See* col. 10, lines 19-20. Other colorants can also be added, as taught at col. 10, lines 36-44, to produce a desired color in the thermal transfer-receiving sheet such that the sheet mimics the look of a certain paper, allowing the sheet to be used for proofing. Narita et al. does not teach, disclose, or suggest that inclusion of any colorant modifies the properties of the polymeric layer into which the colorant is added.

Combining Maier et al. and Narita et al. would not result in the claimed invention. Neither reference teaches, discloses, or suggests an acrylic-containing microbead containing less than 10% by weight styrene monomers having a change in CIELAB b\* toward yellowness less than or equal to 0.2 on

exposure to UV light. There is no teaching in Narita et al. of adding pigments or colorants to a microbead. However, even if one skilled in the art were to insert a pigment or colorant of Narita et al. into the microbeads of Maier et al., one would not obtain the claimed invention. Pigmented or colored microbeads of Maier et al. would still undergo a yellowing over time when exposed to UV light, even if the colorant optically masked the effect, as known to those skilled in the art. Neither reference, taken alone or in combination, teaches, discloses or suggests an acrylic-containing microbead comprising less than 10% by weight styrene monomers that has a change in CIELAB b\* toward yellowness less than or equal to 0.2 on exposure to UV light while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C. Maier et al. in view of Narita et al. therefore does not disclose or suggest the subject matter of the claimed invention.

Neither of the tertiary references of Saito et al. or Hart et al. cure the deficiencies of Maier et al. and Narita et al. Thus, none of the references, taken alone or in any combination, disclose or suggest the subject matter of the claimed invention as set forth in any of claims 1, 2, 5, 7-19, 21, 22, and 24-40. Reconsideration and withdrawal of the rejections are in order, and are respectfully requested.

**35 USC §103(a) over Maier et al. in view of Harrison et al.**

Claims 42 and 43 have been rejected under 35 USC §103(a) over Maier et al. in view of Harrison et al. and in further view of Narita et al. For at least the following reasons, Applicants traverse the rejection.

As discussed above, neither Maier et al. nor Narita et al. teach, disclose, or suggest an acrylic-containing microbead having a change in CIELAB b\* toward yellowness less than or equal to 0.2 on exposure to UV light. Even if one skilled in the art were to insert a pigment or colorant of Narita et al. into the microbeads of Maier et al., one would not obtain the claimed invention because pigmented or colored microbeads of Maier et al. would still undergo a yellowing over time when exposed to UV light, even if the colorant optically masked the effect, as known to those skilled in the art. Neither reference, taken alone or in combination, teaches, discloses or suggests an acrylic-containing microbead comprising less than 10% by weight styrene monomers that has a change in

CIELAB b\* toward yellowness less than or equal to 0.2 on exposure to UV light while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C.

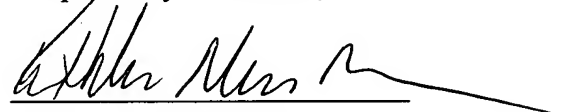
Harrison et al., cited in the Office Action for teaching a dye diffusion thermal transfer dye receiving element "comprising a continuous oriented polymer matrix having dispersed therein microbeads of a cross-linked polymer which are at least partially bordered by void space" (*see* page 5 of the Office Action mailed August 4, 2004) also does not disclose or suggest that the microbeads have a change in CIELAB value b\* towards yellowness on exposure to UV light, wherein the change in b\* is less than or equal to 0.2.

No combination of the cited references of Maier et al., Harrison et al., and Narita et al. discloses or suggests styrenic microbeads having a change in CIELAB value b\* towards yellowness on exposure to UV light less than or equal to 0.2 while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C. Reconsideration and withdrawal of the rejection are in order and are respectfully requested.

Applicants submit all pending claims 1, 2, 5, 7-19, 21, 22, 24-40, 42 and 43 are in condition for allowance for at least the reasons set forth herein. Prompt and favorable action are respectfully solicited.

Should the Examiner have any questions, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,



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